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**FOODS AND DRUGS**

**LABORATORY**

OF THE

**DEPARTMENT OF TRADE AND COMMERCE**

OTTAWA, CANADA

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**BULLETIN No. 421**

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**FLOUR SUBSTITUTES**

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#### NOTES AND COMMENTS.

Under this heading, as occasion arises, the Bulletins issued by this Department will contain, as an appendix, such comment as may seem necessary or advisable upon matters relating to the work of the Department in connection with the administration of the Adulteration Act, the Fertilizers Act, the Feeding Stuffs Act or the Proprietary Medicines Act.

It frequently happens that correspondents ask information regarding the above Acts, of such a nature that the matter in question possesses general interest, and comment upon it would prove acceptable and useful to others than the immediate questioner. In such cases the reply may find a place in these columns. For convenience of reference these notes will be numbered in series.

A. MCGILL,

*Chief Analyst.*

## FOODS AND DRUGS

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## FLOUR SUBSTITUTES

OTTAWA, January 13, 1919.

F. C. T. O'HARA, Esq.,  
Deputy Minister of Trade and Commerce.

SIR.—Owing to the abnormal conditions which have existed in Canada during the last three years, various substitutes for wheat flour have found considerable vogue. Rye, and Barley flours have always been in evidence, but never to such an extent as recently has been the case. Corn starch is a staple, but corn flour (maize flour) has always had a more or less restricted market.

Complaints having been made that instances occurred where these less usual types of flour were not in fact what they professed to be, I have caused a number of samples to be examined with results that disprove any widespread or indeed any notable evidence of fraud. In most instances these flours have shown a larger percentage of fibre (husk) than would be the case in normal times; but this merely means that the product was obtained under conditions of milling akin to those prescribed by the Board of Food Control for Wheat Flour; the intention being to obtain as large a yield of marketable flour as possible from the grain.

Our inspectors sent in 268 samples, which have been examined as follows:

At Ottawa.....	144	samples.
At Halifax.....	43	"
At Winnipeg.....	50	"
At Vancouver.....	31	"
 Total.....	268	"

As regards their species, the following is of interest:

Sold as Corn (Maize) Flour.....	110	samples.
" Rye Flour.....	36	"
" Buckwheat Flour.....	23	"
" Barley Flour.....	5	"
" Oat Flour.....	4	"
" Mixed or Blended Flour.....	90	"
 Total.....	268	"

Many samples exhibited small amounts of intermixture with cereals other than that under which name they were sold; but in most instances, less than 5 per cent. and in few exceeding 10 per cent; so that, considering the exceptional conditions which obtained in 1918, I must regard this intermixture as accidental, rather than as indicating any intention to defraud. The exceptions are a few cases of Buckwheat flour, which contained from 15 to 25 per cent wheat flour. As Buckwheat flour is usually employed in making pancakes it is often sold as Pancake Flour and apparently the addition of wheat flour is looked upon as an improvement of the article for this purpose.

Some 15 of these samples (corn and rye flours) were found to contain worms (larvæ) and their excreta. It is known that flours of low grade (ground from grain from which the husk has been less completely removed) are prone to develop worminess more readily than those which have been more carefully bolted. I am, however, not in a position to say that the samples referred to were sold in a wormy condition, as it was impossible to examine them until they had been some weeks in storage here.

Fortunately the abnormal conditions under which these flours were manufactured and marketed, have become of the past; and it is improbable that millers will be tempted to produce a flour of such character as certain of those now reported, when free to relegate the whole of the fibrous part of the grain to the various forms of stock feed.

I beg to recommend publication of this report as Bulletin No. 421.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,  
*Chief Analyst.*





